Instructions/Parts

AirPro™ EFX Automatic Spray Gun

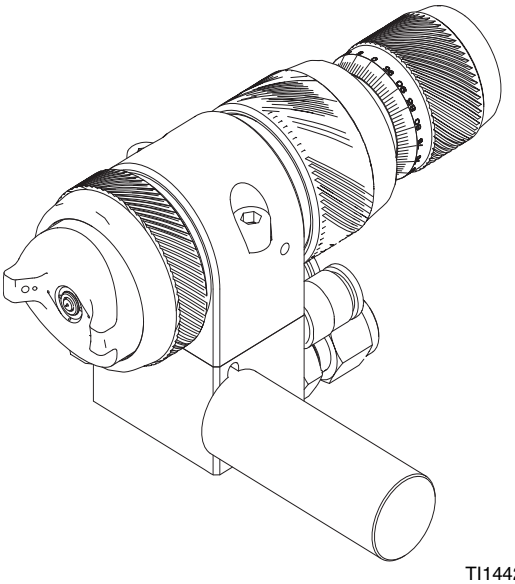
313869K
EN

Conventional, HVLP, HiTEch, and LVMP automatic guns for small component finishing applications. For professional use only.

100 psi (0.7 MPa, 7 bar) Maximum Working Fluid Pressure
100 psi (0.7 MPa, 7 bar) Maximum Working Air Pressure

Important Safety Instructions
Read all warnings and instructions in this manual. Save these instructions.

See page 3 for model information.



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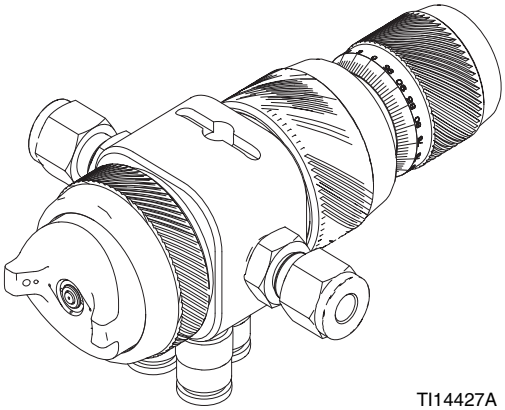
Guns with manifold



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Guns without manifold

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Models

Spray Type	Orifice Size in. (mm)	Models with Manifold**		Models without Manifold	
		Gun Part No.	Series	Gun Part No.	Series
Conventional	0.028 (0.7)	24B857	C	24B877	C
Conventional	0.035 (0.9)	24B858	C	24B878	C
Conventional	0.039 (1.0)	24M390*	A	24M392*	A
Conventional	0.043 (1.1)	24B859	C	24B879	C
Conventional	0.051 (1.3)	24B860	C	24B880	C
Conventional	0.059 (1.5)	24B861*	C	-----	C
HVLP	0.020 (0.5)	24B862	C	-----	C
HVLP	0.028 (0.7)	24B863	C	24B881	C
HVLP	0.043 (1.1)	24B864	C	24B882	C
HVLP	0.051 (1.3)	24B865	C	24B883	C
HiTEch	0.028 (0.7)	24B866	C	24B884	C
HiTEch	0.039 (1.0)	24B867*	C	24B885*	C
HiTEch	0.059 (1.5)	24B868*	C	24B886*	C
LVMP	0.020 (0.5)	24B869	C	24B887	C
LVMP	0.028 (0.7)	24B870	C	24B888	C
LVMP	0.035 (0.9)	24B871	C	24B889	C
LVMP	0.039 (1.0)	24M391*	A	24M393*	A
LVMP	0.039 (1.0)	24P993	A	24P995	A
LVMP	0.043 (1.1)	24B872	C	24B890	C
LVMP	0.051 (1.3)	24B873	C	24B891	C
LVMP	0.051 (1.3)	24P994	A	24P996	A
LVMP	0.059 (1.5)	24B874*	C	-----	C
Air Brush	0.028 (0.7)	24B875	C	24B892	C
Gun without needle, nozzle, or air cap	N/A	24B876	C	24B893	C

** Needle tip and nozzle exit constructed from tungsten carbide.*

*** Models with manifold have fully stainless steel fluid passages.*

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

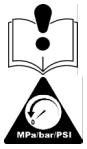
⚠ WARNING

FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in **work area** can ignite or explode. To help prevent fire and explosion:

- Use equipment only in well ventilated area.
- Eliminate all ignition sources; such as pilot lights, cigarettes, portable electric lamps, and plastic drop cloths (potential static arc).
- Keep work area free of debris, including solvent, rags and gasoline.
- Do not plug or unplug power cords, or turn power or light switches on or off when flammable fumes are present.
- Ground all equipment in the work area. See **Grounding** instructions.
- Use only grounded hoses.
- Hold gun firmly to side of grounded pail when triggering into pail.
- If there is static sparking or you feel a shock, **stop operation immediately.** Do not use equipment until you identify and correct the problem.
- Keep a working fire extinguisher in the work area.

⚠ WARNING



EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not exceed the maximum working pressure or temperature rating of the lowest rated system component. See **Technical Data** in all equipment manuals.
- Use fluids and solvents that are compatible with equipment wetted parts. See **Technical Data** in all equipment manuals. Read fluid and solvent manufacturer's warnings. For complete information about your material, request MSDS from distributor or retailer.
- Do not leave the work area while equipment is energized or under pressure. Turn off all equipment and follow the **Pressure Relief Procedure** when equipment is not in use.
- Check equipment daily. Repair or replace worn or damaged parts immediately with genuine manufacturer's replacement parts only.
- Do not alter or modify equipment.
- Use equipment only for its intended purpose. Call your distributor for information.
- Route hoses and cables away from traffic areas, sharp edges, moving parts, and hot surfaces.
- Do not kink or over bend hoses or use hoses to pull equipment.
- Keep children and animals away from work area.
- Comply with all applicable safety regulations.

PRESSURIZED EQUIPMENT HAZARD

Fluid from the gun/dispense valve, leaks, or ruptured components can splash in the eyes or on skin and cause serious injury.

- Follow the **Pressure Relief Procedure** when you stop spraying and before cleaning, checking, or servicing equipment.
- Tighten all fluid connections before operating the equipment.
- Check hoses, tubes, and couplings daily. Replace worn or damaged parts immediately.

PRESSURIZED ALUMINUM PARTS HAZARD

Use of fluids that are incompatible with aluminum in pressurized equipment can cause serious chemical reaction and equipment rupture. Failure to follow this warning can result in death, serious injury, or property damage.

- Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents.
- Many other fluids may contain chemicals that can react with aluminum. Contact your material supplier for compatibility.

⚠ WARNING

TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.

- Read MSDSs to know the specific hazards of the fluids you are using.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.

PERSONAL PROTECTIVE EQUIPMENT

You must wear appropriate protective equipment when operating, servicing, or when in the operating area of the equipment to help protect you from serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. This equipment includes but is not limited to:

- Protective eyewear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

Selection Charts

TERMS

Light Fluid: Up to 18 seconds with No. 2 Zahn cup (20 centipoise)

Medium Fluid:19 to 28 seconds with No. 2 Zahn cup (20-64 centipoise)

Heavy Fluid: Greater than 28 seconds with No. 2 Zahn cup (greater than 64 centipoise) -- 2.8 Volatile Organic Compounds, High-solid Polyurethanes, Heavy Waterborne Enamels

Gun Selection

HVLP Guns

An HVLP gun is a high transfer efficiency gun that limits the air pressure at the air cap to 10 psi (0.07 MPa, 0.7 bar) maximum. In some areas, an HVLP gun is required for compliance with environmental standards. See the Air Cap chart, page 11, for maximum inlet pressure.

LVMP Guns

An LVMP gun is a high transfer efficiency gun that has been tested to have a transfer efficiency greater than or equal to HVLP guns. In addition, the LVMP air cap consumes much less air than the HVLP air cap. Graco LVMP guns have no restrictions on air cap pressures.

Conventional Guns

A conventional gun has excellent atomization and high production rates typically with some reduction in transfer efficiency.

HiTEch Guns

A HiTEch gun is a high transfer efficiency gun with excellent atomization. Graco HiTEch guns have no restrictions on air cap pressures.

Proper Needle/Nozzle Selection

The spray gun's needle/nozzle kits range in size to provide different fluid flow rates. As a general guideline, use the fluid nozzle that will give the required flow with the needle fully triggered at a fluid pressure of 5–20 psi (0.035–0.14 MPa, 0.35–1.4 bar).

- For low flow rates or light viscosity fluid, select the smaller nozzle sizes.
- For high flow rates or high viscosity fluid, select the larger nozzle sizes.
- For abrasive fluids, the gun models with tungsten carbide needle tip and nozzle are recommended.

Orifice Size			Flow	
in.	mm	Viscosity	oz/min	cc/min
0.020	0.5	light	0.2-1.7	5-50
0.028	0.7	light	0.3-3.4	10-100
0.035	0.9	light-medium	0.5-5.1	15-150
0.039	1.0	light-medium	0.7-6.8	20-200
0.043	1.1	light-medium	0.8-8.5	25-250
0.051	1.3	medium	1.2-11.8	35-350
0.059	1.5	medium	1.5-15.2	45-450

Models With Manifolds

Gun Assembly Part No.	Type	Includes:		Orifice Size		Construction of Needle Tip/ Nozzle Exit	Fluid Adjustment Knob	Construction of Fluid Fitting
		Needle/ Nozzle Kit Part No.	Air Cap with Pin Part No.	in.	mm			
24B857	Conven-tional	24D177	24C182	0.028	0.7	Stainless Steel	Indexing	Plastic
24B858	Conven-tional	24C198	24C182	0.035	0.9	Stainless Steel	Indexing	Plastic
24M390	Conven-tional	24C221	24C182	0.039	1.0	Carbide	Indexing	Plastic
24B859	Conven-tional	24C199	24C182	0.043	1.1	Stainless Steel	Indexing	Plastic
24B860	Conven-tional	24C200	24C182	0.051	1.3	Stainless Steel	Indexing	Plastic
24B861	Conven-tional	24D178	24C182	0.059	1.5	Carbide	Indexing	Plastic
24B862	HVLP	24D302	24C183	0.020	0.5	Stainless Steel	Indexing	Plastic
24B863	HVLP	24D179	24C183	0.028	0.7	Stainless Steel	Indexing	Plastic
24B864	HVLP	24D305	24C183	0.043	1.1	Stainless Steel	Indexing	Plastic
24B865	HVLP	24D306	24C183	0.051	1.3	Stainless Steel	Indexing	Plastic
24B866	HiTEch	24D303	24D703	0.028	0.7	Stainless Steel	Ultra Precision	Stainless Steel
24B867	HiTEch	24C221	24D703	0.039	1.0	Carbide	Ultra Precision	Stainless Steel
24B868	HiTEch	24C201	24D704	0.059	1.5	Carbide	Ultra Precision	Stainless Steel
24B869	LVMP	24D277	24C184	0.020	0.5	Stainless Steel	Ultra Precision	Plastic
24B870	LVMP	24D278	24C184	0.028	0.7	Stainless Steel	Ultra Precision	Plastic
24B871	LVMP	24D279	24C184	0.035	0.9	Stainless Steel	Ultra Precision	Plastic
24M391	LVMP	24C221	24C184	0.039	1.0	Carbide	Ultra Precision	Plastic
24P993	LVMP	24R001	24C184	0.039	1.0	Stainless Steel	Ultra Precision	Plastic
24B872	LVMP	24D280	24C184	0.043	1.1	Stainless Steel	Ultra Precision	Plastic
24B873	LVMP	24D281	24C184	0.051	1.3	Stainless Steel	Ultra Precision	Plastic
24P994	LVMP	24R002	24C184	0.051	1.3	Stainless Steel	Ultra Precision	Plastic
24B874	LVMP	24D284	24C184	0.059	1.5	Carbide	Ultra Precision	Plastic
24B875	Air Brush	24C197	24D705	0.028	0.7	Stainless Steel	Indexing	Plastic
24B876	N/A	N/A	N/A	N/A	N/A	N/A	Indexing	Plastic

Models Without Manifolds

Gun Assembly Part No.	Type	Includes:		Orifice Size		Construction of Needle Tip/ Nozzle Exit	Fluid Adjustment Knob	Construction of Fluid Fitting
		Needle/ Nozzle Kit Part No.	Air Cap with Pin Part No.	in.	mm			
24B877	Conven-tional	24D177	24C182	0.028	0.7	Stainless Steel	Lock Ring	Plastic
24B878	Conven-tional	24C198	24C182	0.035	0.9	Stainless Steel	Lock Ring	Plastic
24M392	Conven-tional	24C221	24C182	0.039	1.0	Carbide	Lock Ring	Plastic
24B879	Conven-tional	24C199	24C182	0.043	1.1	Stainless Steel	Lock Ring	Plastic
24B880	Conven-tional	24C200	24C182	0.051	1.3	Stainless Steel	Lock Ring	Plastic
24B881	HVLP	24D179	24C183	0.028	0.7	Stainless Steel	Indexing	Plastic
24B882	HVLP	24D305	24C183	0.043	1.1	Stainless Steel	Indexing	Plastic
24B883	HVLP	24D306	24C183	0.051	1.3	Stainless Steel	Indexing	Plastic
24B884	HiTEch	24D303	24D703	0.028	0.7	Stainless Steel	Ultra Precision	Stainless Steel
24B885	HiTEch	24C221	24D703	0.039	1.0	Carbide	Ultra Precision	Stainless Steel
24B886	HiTEch	24C201	24D704	0.059	1.5	Carbide	Ultra Precision	Stainless Steel
24B887	LVMP	24D277	24C184	0.020	0.5	Stainless Steel	Indexing	Plastic
24B888	LVMP	24D278	24C184	0.028	0.7	Stainless Steel	Indexing	Plastic
24B889	LVMP	24D279	24C184	0.035	0.9	Stainless Steel	Indexing	Plastic
24M393	LVMP	24C221	24C184	0.039	1.0	Carbide	Indexing	Plastic
24P995	LVMP	24R001	24C184	0.039	1.0	Stainless Steel	Indexing	Plastic
24B890	LVMP	24D280	24C184	0.043	1.1	Stainless Steel	Indexing	Plastic
24B891	LVMP	24D281	24C184	0.051	1.3	Stainless Steel	Indexing	Plastic
24P996	LVMP	24R002	24C184	0.051	1.3	Stainless Steel	Indexing	Plastic
24B892	Air Brush	24C197	24D705	0.028	0.7	Stainless Steel	Indexing	Plastic
24B893	N/A	N/A	N/A	N/A	N/A	NA	Indexing	Plastic

Air Caps

Air Cap Part No.	Type	Nozzle Orifice		Recommended Gun/Manifold Inlet Pressure psi (MPa, bar)	Air Cap Color
		in.	mm.		
24C182	Conventional	0.028-0.059	0.7-1.5	43 (0.3, 3.0)	Blue-Grey
24C183	HVLP	0.020-0.051	0.5-1.3	15 (0.1, 1.0)*	Pewter
24D703	HiTEch	0.028-0.039	0.7-1.0	29 (0.2, 2.0)	Black
24D704	HiTEch	0.059	1.5	29 (0.2, 2.0)	Black
24C184	LVMP	0.020-0.059	0.5-1.5	43 (0.3, 3.0)	Brown
24D705	Air Brush	0.028	0.7	29 (0.2, 2.0)	Clear

* *Maximum compliant HVLP inlet pressure.*

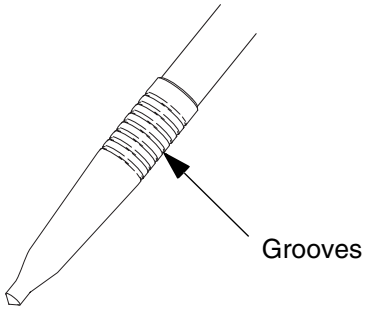
Sample Pattern Sizes and Shapes

Air Cap Part No.	Type	Nozzle Orifice in. (mm)	Recommended Gun/Manifold Inlet Pressure psi (MPa, bar)	Fluid* Flow Rate oz/min (cc/min)	Spray Distance in (cm)	Pattern Shape	Pattern Size* in. (mm)
24C182	Conventional	0.028 (0.7)	43 (0.3, 3.0)	2.7 (80)	6 (15)	Taper	1.0-6.0 (25-152)
24C183	HVLP	0.028 (0.7)	15 (0.1, 1.0)	2.7 (80)	6 (15)	Straight	1.0-6.5 (25-165)
24D703	HiTEch	0.028 (0.7)	29 (0.2, 2.0)	2.7 (80)	6 (15)	Straight	1.0-6.5 (25-165)
24D704	HiTEch	0.059 (1.5)	29 (0.2, 2.0)	2.7 (80)	6 (15)	Straight	1.0-6.5 (25-165)
24C184	LVMP	0.028 (0.7)	43 (0.3, 3.0)	2.7 (80)	6 (15)	Straight	1.0-6.5 (25-165)
24D705	Air Brush	0.028 (0.7)	29 (0.2, 2.0)	1.0 (30)	2 (5)	Round	0.5 (13)
					4 (10)		0.6 (15)
					6 (15)		0.7 (19)

** Fluid viscosity for these samples was 30 centipoise.*

Needle Assembly Identification

Part	Needle Assembly Size	# of Grooves
24C190	0.5 mm	1
24C191	0.7 mm	2
24C192	0.9 mm	3
24C193	1.1 mm	4
24C194	1.3 mm	5



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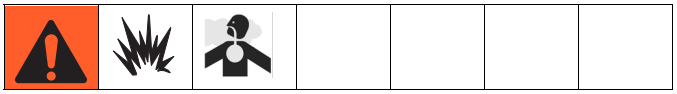
Installation

This spray gun can spray most coatings or finishes currently being used for small component plastic, wood and metal finishing applications, while easily operating from paint delivery systems, such as pressure pots or remote pumps for production line operation.

The air regulator must have a minimum air flow capacity of 30 scfm at 100 psi (0.7 MPa, 7.0 bar) air pressure.

Ventilate Spray Booth



To prevent hazardous concentrations of toxic and/or flammable vapors, spray only in a properly ventilated spray booth. Do not operate the spray gun unless ventilation fans are operating.

- Check and follow all national, state, and local codes regarding air exhaust velocity requirements.
- Check and follow all local safety and fire codes.

Configure Gun and Manifold

Guns with Manifold

See FIG. 1. The gun is shipped with a fluid plug (25). To use the gun in a circulating system, do not install the plug. In a non-circulating system, install the plug as shown to minimize flush time.

1. Connect the fluid supply line to one fluid port fitting and the fluid return line to the other. The manifold fluid ports are reversible.
2. Install the gun on the manifold, using the two screws. Torque the screws evenly to 50 in-lb (5.6 N•m).

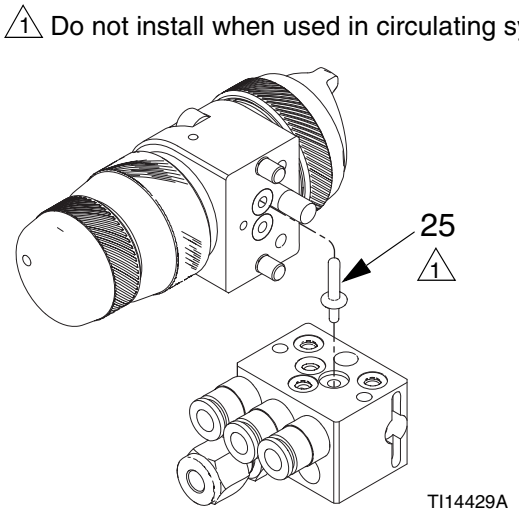


FIG. 1: Guns with Manifold

Guns without Manifold

The gun is shipped ready for use in a circulating system, with a fitting installed in each fluid port. Connect the fluid supply line to one fluid inlet fitting (15) and the fluid return line to the other.

To use the gun in a non-circulating system, remove one fitting and replace with plug (33, shipped loose). Use the 3/16 allen wrench supplied to tighten the plug.

△1 Install for use in a non-circulating system.

△2 Use fitting (15) for use in a circulating system.

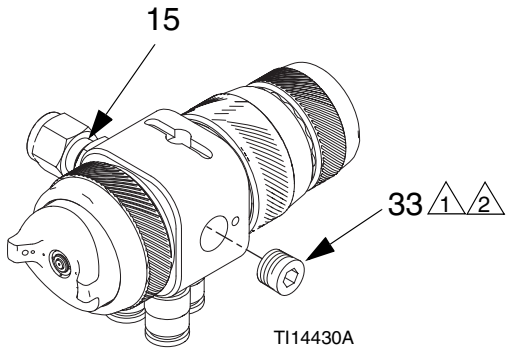


FIG. 2: Guns without Manifold

Ground System

The following grounding instructions are minimum requirements for a system. Your system may include other equipment or objects that must be grounded. Check your local electrical code for detailed grounding instructions for your area and type of equipment. Your system must be connected to a true earth ground.

Pump/Fluid Supply

Ground the pump by connecting a ground wire and clamp between the fluid supply and a true earth ground as instructed in your separate pump instruction manual.

Air Compressors and Hydraulic Power Supplies

Ground the air compressors and hydraulic power supplies according to the manufacturer recommendations.

Spray Gun

Ground the spray gun by mounting the manifold to a properly grounded reciprocator, robot, or stationary mount. Check the electrical resistance between the manifold and a true earth ground. Resistance must not exceed 1 megohm.

Fluid Supply Container

Ground the fluid supply container according to local code.

Object Being Sprayed

Ground the object that is being sprayed according to local code.

Solvent Pails

Ground all solvent pails that are used when flushing according to local code. Use only conductive metal pails placed on a grounded surface. Do not place the pail on a non-conductive surface, such as paper or cardboard, which interrupts the grounding continuity.

Mount Gun

Reciprocating Arm Rod Mount

To mount the gun on a reciprocating arm rod [0.75 in. (19 mm) diameter maximum], insert the bar (A) through the hole in the manifold as shown in FIG. 3.

NOTE: Use the 1/8 in. alignment slot (P) to assist in orienting the gun.

Secure the gun to the bar by tightening the mounting screw (B).

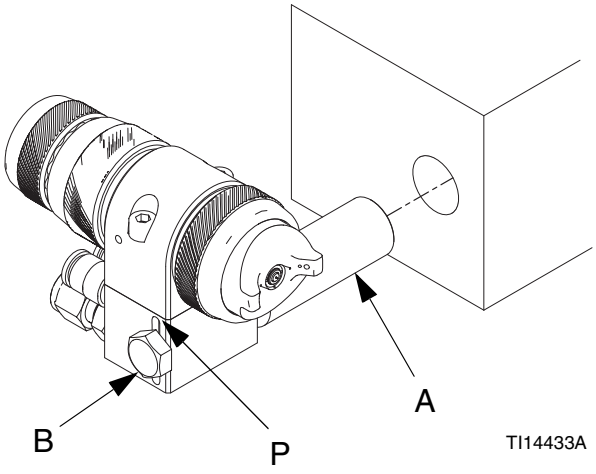


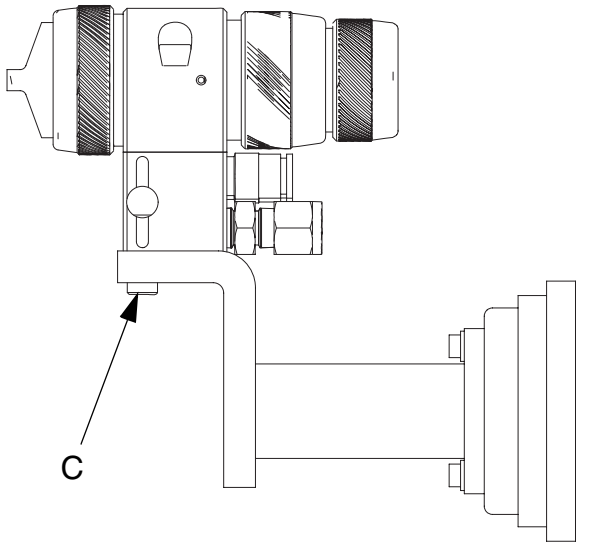
FIG. 3: Reciprocating Arm Mount

Stationary Support

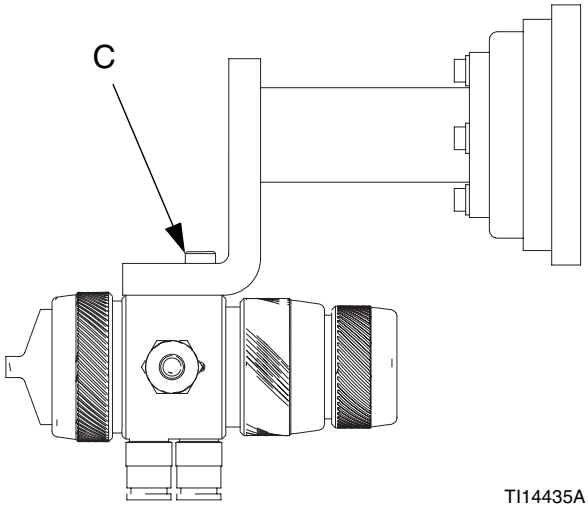
To mount the gun on a stationary support, refer to FIG. 4 and to the correct mounting hole layout for your gun, page 34 - 35.

1. Align the gun or manifold with the alignment pins. Locate alignment slot and holes per the mounting hole layout.

2. Secure the gun to the support with two M8 x 1.25 capscrews (C). The screws must be long enough to engage the threaded holes to a depth of 1/4 in. (6 mm).



Guns with manifold



Guns without manifold

FIG. 4: Stationary Support Mount

Setup

Connect Air Line

NOTE:

- If your regulated air source does not have a filter, install an air filter (G) on each air line to ensure a dry, clean air supply to the gun. Dirt and moisture can ruin the appearance of your finished workpiece. See FIG. 5.
- You must install a separate air pressure regulator (F) on the CYL, FAN, and ATOM air lines to control air pressure to the gun. See FIG. 6 and FIG. 7.
- Install a bleed type air shutoff valve (E) on each gun air supply line, downstream of the gun air regulator, to shut off air to the gun.

1. The gun cylinder, fan, and atomization air must be supplied and regulated separately. To regulate air remotely, use solenoids (see FIG. 6 and FIG. 7).

NOTE: The three air inlet fittings accept 6 mm OD tubing.

2. Connect each air hose (D) to a regulated air supply line (H).

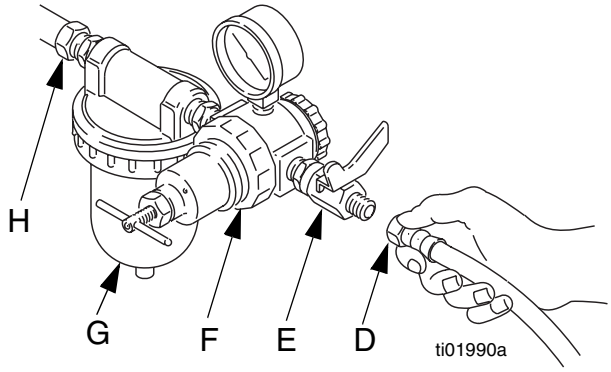


FIG. 5: Connect Air Line

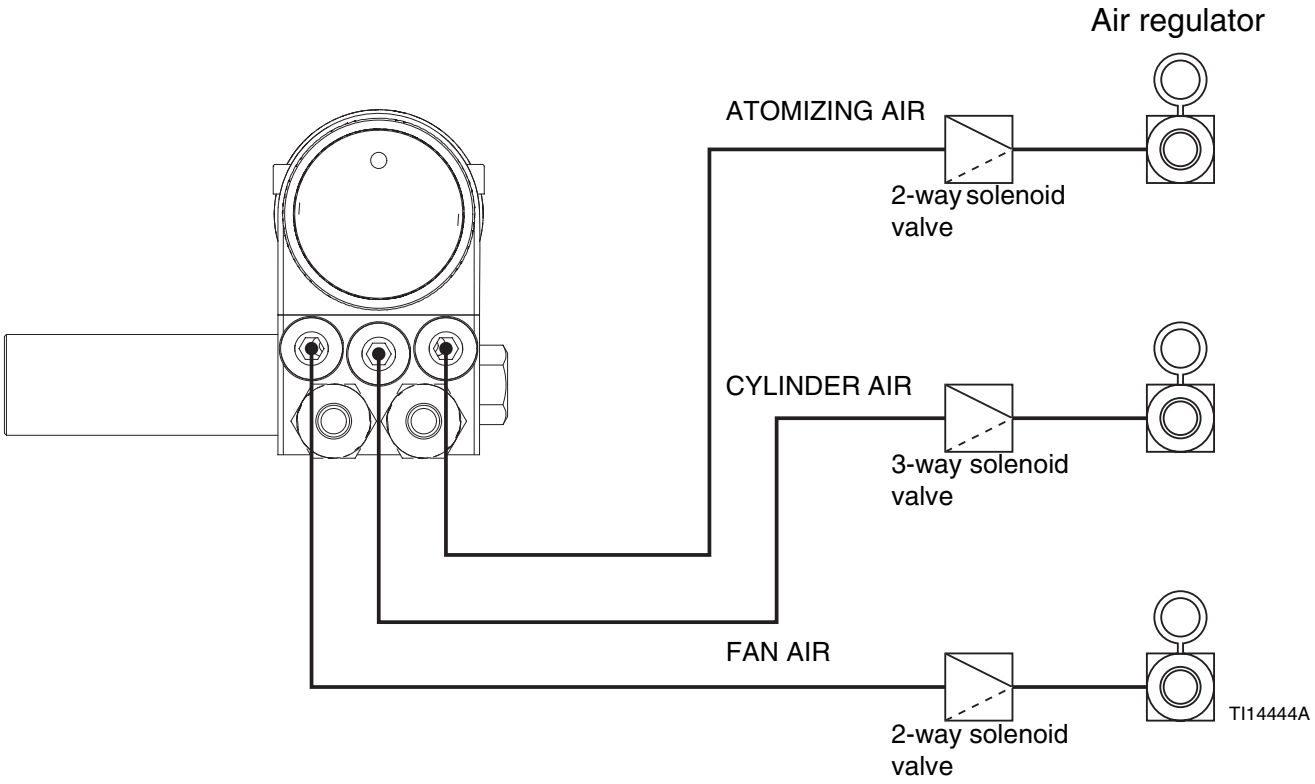


FIG. 6: Remote Air Regulation using Solenoid (Guns with Manifold)

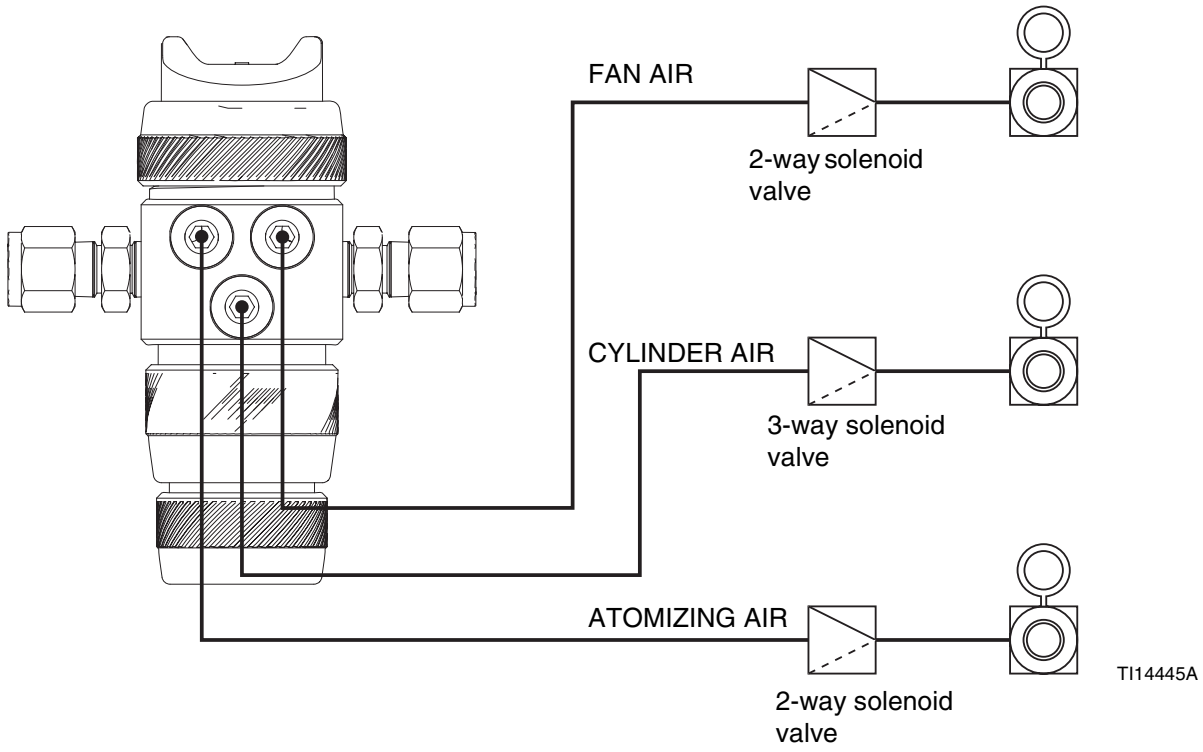


FIG. 7: Remote Air Regulation using Solenoid (Guns without Manifold)

Connect Fluid Hose

NOTE:

- Before connecting the fluid line, blow it out with air and flush it with solvent. Use solvent that is compatible with the fluid to be sprayed.
- Install a fluid regulator (L) on the fluid line to control fluid pressure to the gun. See FIG. 8.
- Install a fluid shutoff valve (M) to shut off the fluid supply to the gun.
- Filter the fluid line of coarse particles and sediment to avoid clogging the fluid nozzle and causing finishing defects. Inline fluid filter 24B707 is available.

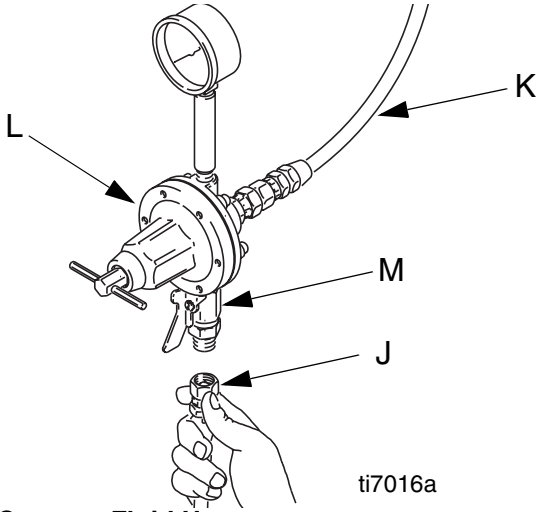


FIG. 8: Connect Fluid Hose.

1. Connect the fluid supply hose (J) to the gun fluid inlet (S), 6 mm OD tube fitting. See FIG. 9.

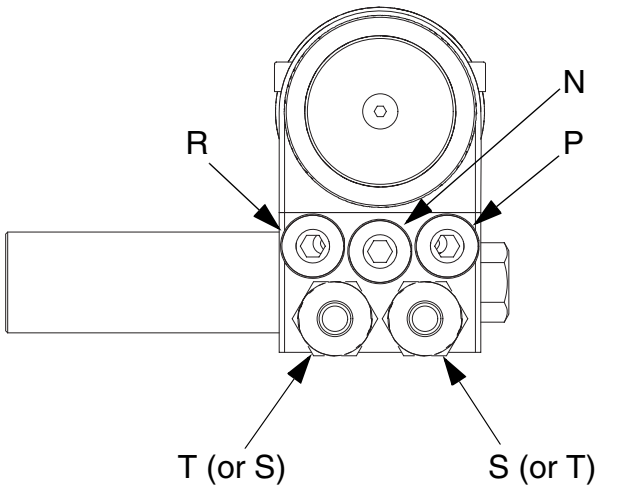
2. Connect the other end of the fluid hose (J) to a regulated fluid supply outlet (M).

3. **In a circulating system**, connect a grounded fluid return hose to the gun fluid outlet (T). See FIG. 9.

   In a non-circulating system, remove the gun fluid outlet fitting (T) and plug the outlet port with the pipe plug (33) supplied for guns without manifold. Guns with manifold use plug 24C211 (25, see page 12).

KEY
N Cylinder Air Inlet: accepts 6 mm OD tubing
P Atomization Air Inlet: 6 mm OD tubing
R Fan Air Inlet: 6 mm OD tubing
S Fluid Inlet: 6 mm OD tubing
T Fluid Outlet (circulating gun only): 6 mm OD tubing

With Manifold



Without Manifold

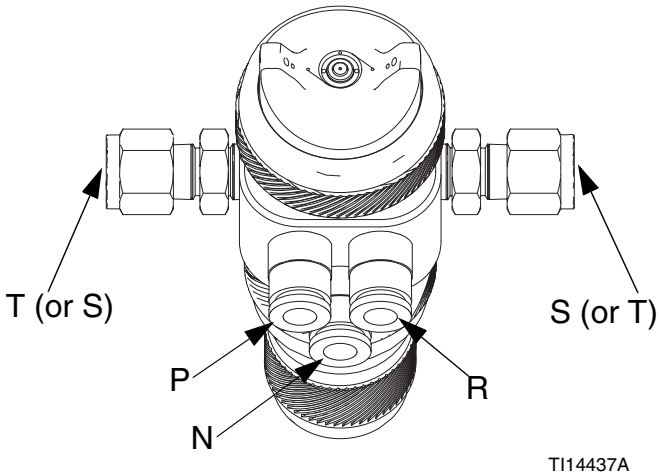


FIG. 9: Air and Fluid Ports

Flush Spray Gun

Before running any paint through the spray gun:

1. Flush the gun with a solvent that is compatible with the fluid to be sprayed, using the lowest possible fluid pressure and a grounded metal container. See **Clean and Flush Gun**, page 22.
2. Perform **Pressure Relief Procedure**, page 20.

Position Air Cap

Air caps are factory-set with the alignment pin (A) set to a vertical spray pattern. To change the air cap to a horizontal spray pattern, use a 1/16 in. hex wrench to unscrew the alignment pin (A) and relocate it to the horizontal spray pattern hole. When relocating the pin use low strength thread locker. Torque to 1.5-2.5 in-lb (0.2-0.3 N•m). ***Do not overtighten***. Refer to FIG. 10.

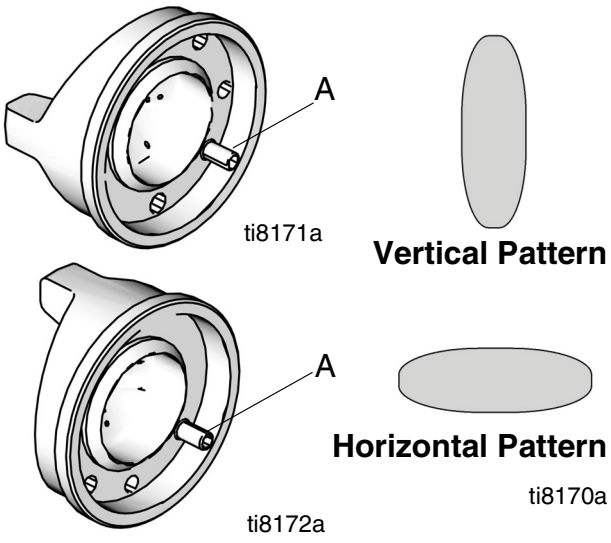


FIG. 10: Position Air Cap

Adjust Spray Pattern

Do not exceed 100 psi (0.7 MPa, 7 bar) maximum fluid and air pressure. Higher pressures can cause parts to rupture and result in serious injury.

Use the fluid pressure regulator to adjust the spray gun fluid flow. All models are equipped with a fluid control knob to make precise fluid flow adjustments.

Follow these steps to establish the correct fluid flow and air flow:

1. To achieve desired flow, adjust the fluid flow using the fluid pressure regulator (L) installed in the gun fluid line. Typical industrial flow rates will vary with regulator pressures from 5 to 30 psi (34 to 210 kPa, 0.3 to 2.1 bar). If the fluid pressure is too low at the desired flow rate, install a smaller nozzle. If the fluid pressure is too high, install a larger nozzle.

   For spray guns equipped with the fluid control knob, you can make flow rate changes at the spray gun. Rotate the fluid control knob clockwise to reduce the flow.

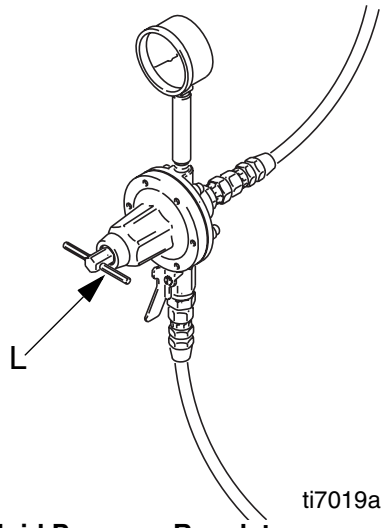


FIG. 11: Fluid Pressure Regulator

NOTE: A larger fluid nozzle at a reduced fluid pressure will maintain the same flow rate, but the fluid stream (velocity) will slow down. When air is applied, the lower velocity allows the air to act on the fluid longer, which improves atomization.

2. Using the air pressure regulator (F), set the fan and atomizing air supply pressure per Table 1. Use these suggested settings as a starting point.

Table 1: Suggested Starting Settings

Spray Type	**Fan Air** psi (MPa, bar)	**Atomizing Air** psi (MPa, bar)
Conven-tional	43 (0.3, 3.0)	43 (0.3, 3.0)
HVLP	15 (0.1, 1.0)	15 (0.1, 1.0)
HiTEch	29 (0.2, 2.0)	29 (0.2, 2.0)
LVMP	43 (0.3, 3.0)	43 (0.3, 3.0)
Air Brush	NA	29 (0.2, 2.0)

NOTE: HVLP Gun Limits

HVLP Guns: local laws may limit the maximum pressure to 10 psi (70 kPa, 0.7 bar) at the air cap for compliance. See the table on page 11 for maximum HVLP manifold inlet pressures. To measure pressure at the air cap, use the appropriate HVLP Pressure Verification Kit.

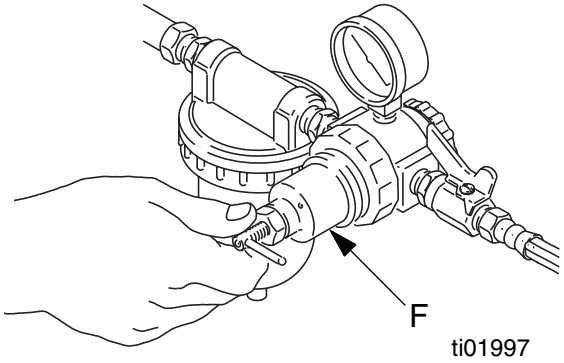


FIG. 12: Air Pressure Regulator

3. Test the spray pattern atomization while keeping the gun a consistent distance, about 6 to 8 inches (150 to 200 mm), from the test piece.

   Check the atomization quality. Increase the gun atomizing air supply pressure with the air pressure regulator in 5 psi (34 kPa, 0.3 bar) increments until you obtain the desired atomization.

NOTE: For the best transfer efficiency, use the lowest setting needed to achieve desired finish quality.

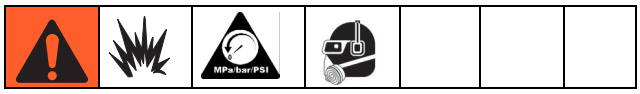
4. If the spray pattern is too wide or split, reduce the fan air pressure.

NOTE: Reducing the fan air pressure to 0 psi (or fully closing the fan adjustment valve) will produce a round pattern.

To further control the spray pattern, use an alternate air cap. For a list of available air caps, see page 11.

Operation

Pressure Relief Procedure



1. Turn off all bleed type air valves and all other air and fluid supplies to the gun.
2. Trigger the gun into a grounded metal waste container to relieve fluid pressure.

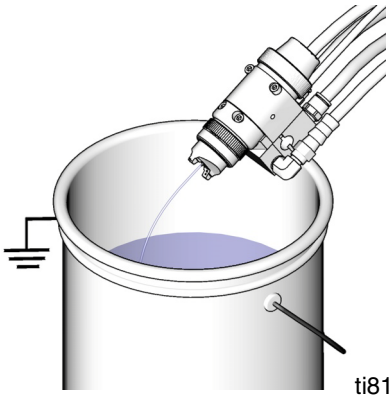


FIG. 13: Pressure Relief

Apply Fluid

The gun does not have an air shutoff. The air should be activated before the fluid to ensure full atomization of fluid and prevent buildup on the air cap.

Adjust the system control device, if it is automatic, so the gun starts spraying just before meeting the part and stops as soon as the part has passed.

To achieve best results when applying fluid:

- Keep gun perpendicular and 6 to 8 in. (150 to 200 mm) from object being sprayed.
- Use smooth, parallel strokes across surface to be sprayed with 50% overlap.

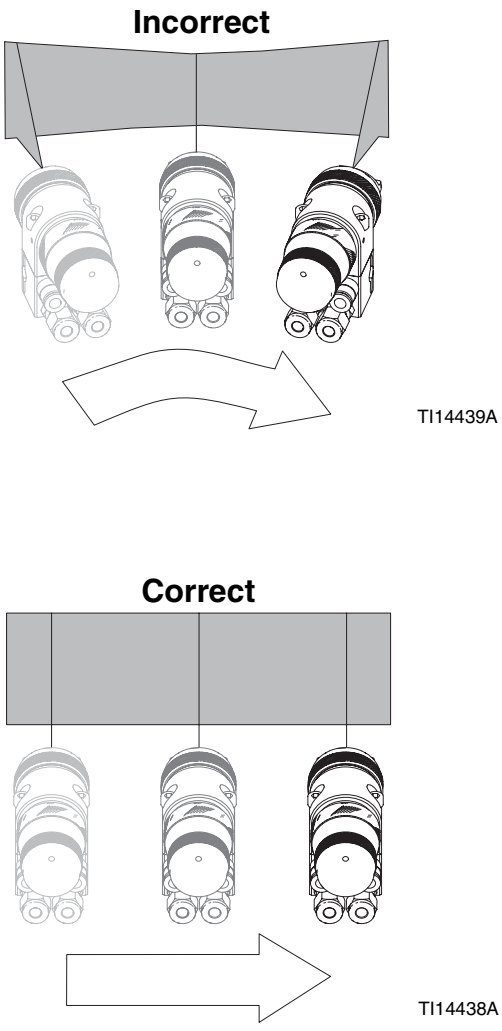
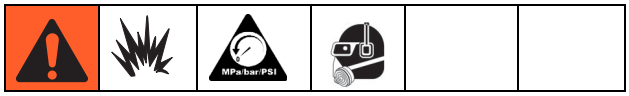


FIG. 14: Correct Spray Method

Daily Gun Care



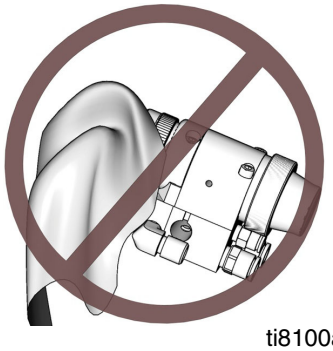
NOTICE

Methylene chloride with formic or propionic acid is not recommended as a flushing or cleaning solvent with this gun as it will damage aluminum and nylon components.

NOTICE

Solvent left in gun air passages could result in a poor quality paint finish. Do not use any cleaning method which may allow solvent into the gun air passages.

Do not point the gun up while cleaning it.



ti8100a

Do not wipe the gun with a cloth soaked in solvent; wring out the excess.

ti4827a

Do not immerse the gun in solvent.

ti8101a

Do not use metal tools to clean the air cap holes as this may scratch them; scratches can distort the spray pattern.

ti8175a

General System Maintenance

- Follow the **Pressure Relief Procedure**, page 20.
- Clean the fluid and air line filters daily.
- Check for any fluid leakage from the gun and fluid hoses. Tighten fittings or replace equipment as needed.
- Flush the gun before changing colors and whenever you are done operating the gun.

Clean and Flush Gun

1. Follow the **Pressure Relief Procedure**, page 20.
2. Shut off the gun fan and atomizing air.
3. Supply a compatible solvent to the gun fluid inlet.
4. Point the gun down into a grounded metal container, and flush the gun with solvent until all traces of paint are removed from the gun passages.
5. Follow the **Pressure Relief Procedure**, page 20.
6. Disconnect the solvent supply.
7. Remove the air cap retaining ring and air cap.

NOTICE

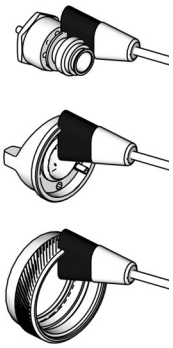
Trigger the gun whenever you tighten or remove the nozzle. This keeps the needle seat away from the nozzle seating surface and prevents the seat from being damaged.

8. Clean the air cap retaining ring, air cap, and fluid nozzle with solvent.
9. Dip the end of a soft-bristle brush into a compatible solvent. Do not continuously soak the brush's bristles with solvent and do not use a wire brush.

ti4845a

FIG. 15: Use solvent-dipped soft-bristle brush

10. With the gun pointed down, clean the front of the gun, using the soft-bristle brush and solvent.
11. Scrub the air cap retaining ring, air cap, and fluid nozzle with the soft-bristle brush (see FIG. 16). To clean out air cap holes, use a soft implement, such as a toothpick, to avoid damaging critical surfaces. Clean the air cap and fluid nozzle daily, minimum. Some applications require more frequent cleaning.



ti8176a

FIG. 16: Clean air cap, ring and fluid nozzle

12. Install the air cap retaining ring and air cap.
13. Dampen a soft cloth with solvent and wring out the excess. Point the gun down and wipe off the outside of the gun.

Troubleshooting

Problem	Cause	Solution
Spray Pattern **Right**	Normal pattern.	No action necessary.
Spray Pattern **Wrong** Heavy top or bottom	Dirty or damaged air cap or fluid nozzle.	Rotate air cap (5) 180°. *If pattern follows air cap,* problem is in air cap. Clean and inspect. If pattern is not corrected, replace air cap. *If pattern does not follow the air cap,* the problem is with the fluid nozzle (4). Clean and inspect the nozzle. If the pattern is not corrected, replace nozzle.
Spray Pattern **Wrong** Split pattern	Fan pressure too high for viscosity of material being sprayed.	Reduce fan air pressure and increase material viscosity.
Spray Pattern **Wrong**	Dirty or distorted air horn holes.	Clean and inspect air cap (5). If pattern is not corrected, replace air cap.

Problem	Cause	Solution
Gun spitting.	Air getting into paint stream.	Check if fluid source is empty and fill. Tighten fluid nozzle (4). Check fluid nozzle o-ring (3) for damage. Check fluid nozzle (4) for damage.
Will not spray.	Fluid control valve (11) turned too far clockwise.	Adjust fluid control valve (11) counterclockwise.
	Fluid source empty.	Refill.
Excessive air blowing back.	Loose fluid nozzle (4).	Tighten fluid nozzle (4).
	Damaged fluid nozzle seal (3).	Replace seal (3).
Gun fluid pressure is too high with gun triggered (cannot achieve desired flow rate).	Using needle/nozzle kit with too small orifice.	Use needle/nozzle kit with larger orifice.
Using a low fluid pressure setting, the fluid flow is too high, making it necessary to restrict needle travel to reduce fluid flow.	Using needle/nozzle kit with too large orifice.	Use needle/nozzle kit with smaller orifice.
Fluid system will not operate at low enough pressure [below 10 psi (70 kPa, 0.7 bar)].	There is no fluid regulator, or air regulator is not sensitive enough at low pressure.	Add low pressure fluid regulator, or add more sensitive low pressure air regulator.
Fluid flow is fluttering while spraying.	Fluid source empty.	Refill.

Service

NOTE: Numbers in parenthesis in the text refer to the reference numbers in the figures and in the parts list.

Disassembly

1. Follow the **Pressure Relief Procedure**, page 20.
2. Remove gun for service:
   a. **With Manifold:** Use the 4 mm allen wrench supplied to unscrew the two screws (16) and remove the gun from the manifold.
   b. **Without Manifold:** Disconnect the air and fluid hoses. Remove the gun from the mounting arm.
3. Remove the air cap retaining ring (21) and air cap (5).
4. Remove the fluid adjustment knob (11) and spring (10).
5. Pull the piston (7) and fluid needle (6) out of the back of the gun.

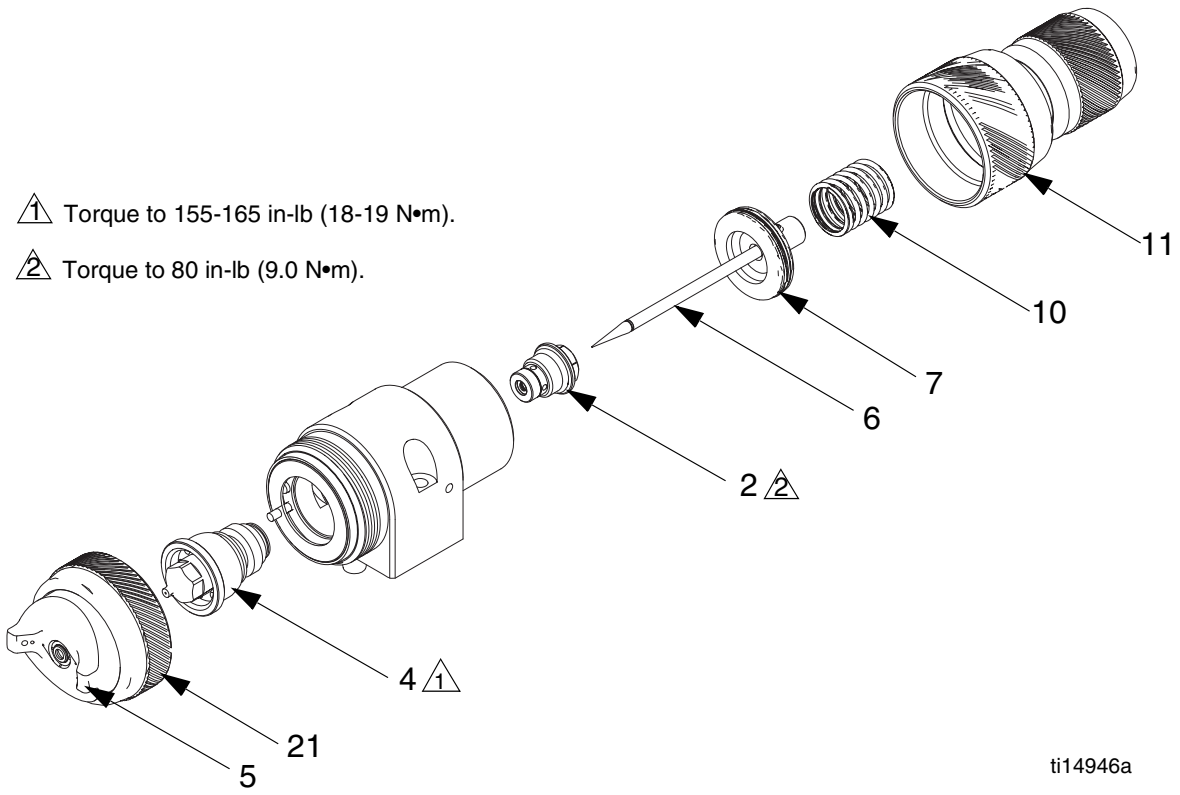


FIG. 17

6. Use a 1/16 hex wrench to loosen the fluid needle set screw (7a). Remove the needle (6) from the piston (7).

7. Check the fluid needle (6) for damage or excessive wear. Replace the needle if necessary.

NOTICE

The needle and tip are permanently bonded. To prevent damage to the needle, do not try to separate.

8. Use the 10 mm hex nut driver to remove the fluid packing nut (2).

9. Use the 10 mm wrench to remove the nozzle (4).

Reassembly

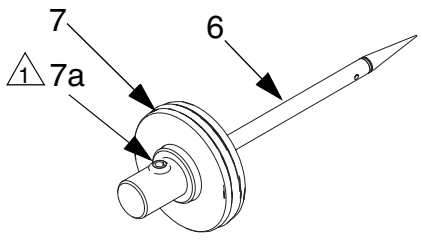
1. Lightly grease the new nozzle (4), which includes o-ring (3). Use the 10 mm wrench to install the nozzle. Torque to 155-165 in-lb (18-19 N•m).

2. Install the new air cap assembly (5, includes air cap, o-ring, washer, and alignment pin) and the retaining ring (21).

NOTE: Be sure to move the alignment pin if you want a horizontal spray pattern. See **Position Air Cap**, page 18.

3. Use the 10 mm hex nut driver to install new fluid packing nut (2, includes o-ring). Torque to 80 in-lb (9.0 N•m).

4. Insert the new needle (6) in the piston (7). Apply medium-strength thread sealant to the setscrew (7a). Use the 1/16 hex wrench to torque the setscrew to 4.5 to 5.5 in-lb (0.5 to 0.6 N•m).



1 Torque to 4.5 to 5.5 in-lb (0.5 to 0.6 N•m).

FIG. 18

NOTICE

To avoid damage, the nozzle (4) must be installed before the needle (6).

To avoid damage to the needle (6) if the nozzle (4) is removed without full gun disassembly, turn the fluid adjustment knob (11) fully counterclockwise to remove pressure from the needle before reassembling the nozzle.

5. Grease the needle shaft and piston o-ring. Push the needle/piston assembly into the gun as far as possible. Insert spring (10).

6. Turn counterclockwise to fully open the fluid adjustment knob (11). Install the knob hand-tight.

NOTE: If you have an ultra-precision fluid adjustment knob, loosen the set screw to adjust the position of the hash markings for convenient reading.

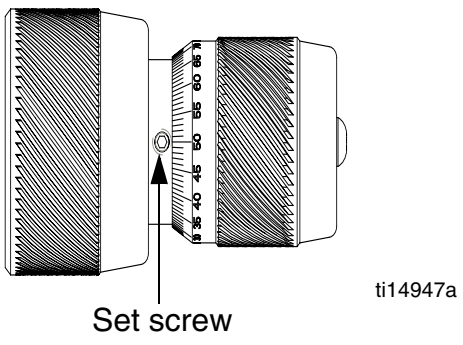
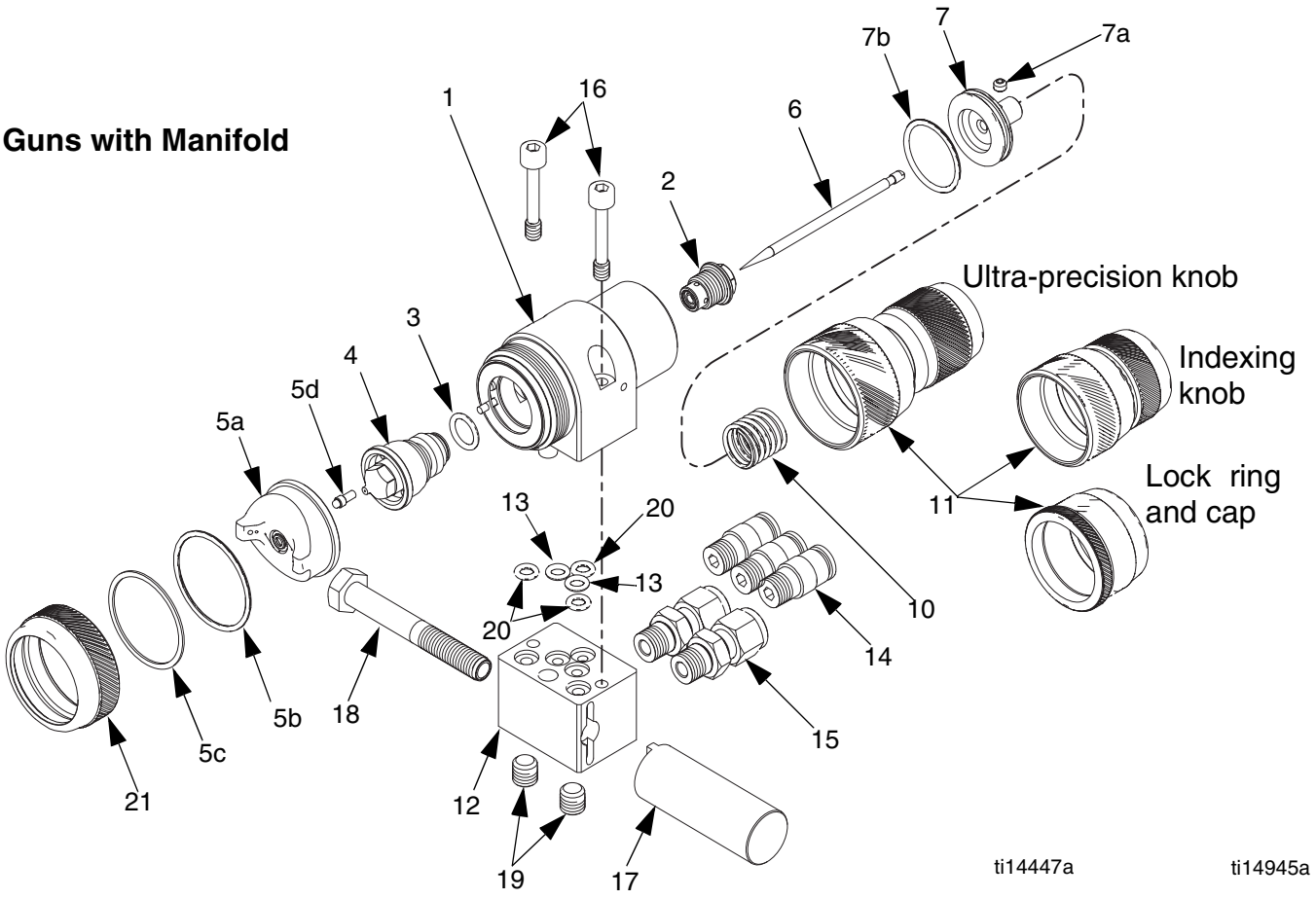


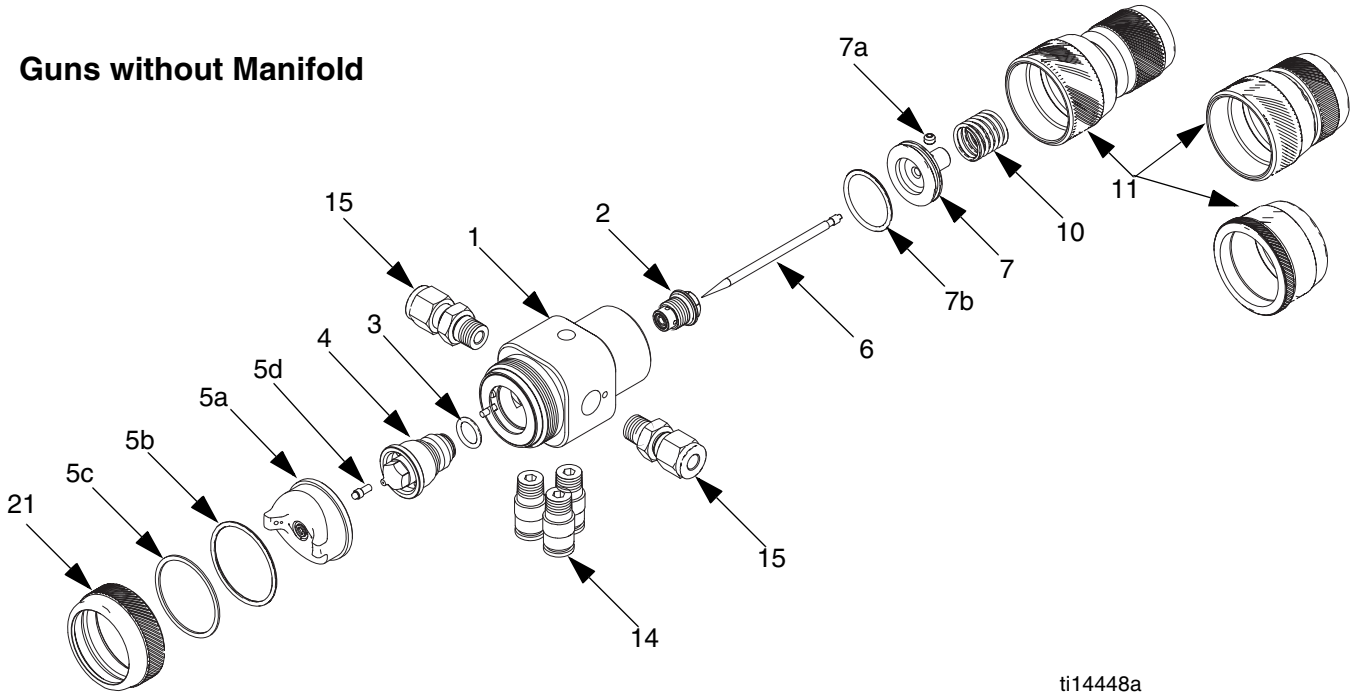
FIG. 19

Parts

Guns with Manifold



Guns without Manifold



Parts in Common

Ref.	Part	Description	Qty.
1	-----	BODY	1
2	24C205	FLUID PACKING ASSEMBLY	1
3	119348	O-RING (included with Part 4)	1
4	See Table	NOZZLE, fluid (includes Part 3)	1
5	See Table	AIR CAP ASSEMBLY (includes Parts 5a-5d)	
5a	-----	AIR CAP	1
5b✓	-----	O-RING	1
5c✓	-----	WASHER, UMHWPE	1
5d	-----	PIN, alignment	1
6	See Table	NEEDLE assembly	1
7	24C202	PISTON, needle stop (includes Parts 7a and 7b)	1
7a	-----	SCREW, set, 6-32 UNC x 1/16 in.	1
7b	117559	O-RING	1
10	24C207	SPRING, compression	1
11	 24D065 24R133 24C204 24R134 24C203	KNOB, fluid adjustment Ultra-Precision Ultra-Precision (for 24P993 and 24P994 only) Indexing Indexing (for 24P995 and 24P996 only Lock ring and cap	1
14	120538	FITTING, tube, air line, 1/8 npt x 6 mm	3
15	 24C213 24D046	FITTING, tube, fluid line, 1/8 npt x 6 mm Nylon Stainless steel	2
21	289079	RETAINING RING, assembly (includes 5b and 5c)	1
23	114141	TOOL, wrench, hex, 1/16, not shown	1
24	107157	TOOL, wrench, allen, 4 mm, not shown	1
26	101821	TOOL, wrench, allen, 3/16, not shown (Models without manifold)	1
31	24C210	TOOL, wrench, metric, not shown	1
32	24C209	TOOL, nut driver, hex, 10 mm, not shown	1
33	100139	PLUG, pipe, not shown, shipped loose (Models without manifold)	1

Additional Parts for Models with Manifold

Ref.	Part	Description	Qty.
12	24C215	MANIFOLD, gun (includes Parts 13, 14, 15, 19, and 20)	1
13	106456†	O-RING, PTFE, white	2
16	24C206	SCREW, mounting	2
17	24C208	ROD, mounting (includes Part 18)	1
18	-----	SCREW, cap, hex head	1
19	24C212	SCREW, set socket, M8	2
20	112319†	O-RING, FX75, black	3
25	24C211	PLUG, manifold, not shown, shipped loose	1

----- Not sold separately.

✓ *Included in Air Cap Seal Kit 289791. See* ***Repair Kits****, page 30.*

† *Included in Manifold O-Ring Kit 24D827. See* ***Repair Kits****, page 30.*

Repair Kits

Spray Type	Gun Part Number		Nozzle Orifice Size in. (mm)	Needle/Nozzle Kit (Includes Items 4 and 6)	Item 4 Nozzle (includes o-ring)	Item 6 Needle Assembly (includes tip)	Item 5 Air Cap (Includes seals and alignment pin)
	With Manifold	Without Manifold					
Conventional	24B857	24B877	0.028 (0.7)	24D177	24D174	24C191	24C182
Conventional	24B858	24B878	0.035 (0.9)	24C198	24C187	24C192	
Conventional	24M390*	24M392*	0.039 (1.0)	24C221	24C219	24C220	
Conventional	24B859	24B879	0.043 (1.1)	24C199	24C188	24C193	
Conventional	24B860	24B880	0.051 (1.3)	24C200	24C189	24C194	
Conventional	24B861*	-----	0.059 (1.5)	24D178	24D175	24C195	
HVLP	24B862	-----	0.020 (0.5)	24D302	24D296	24C190	24C183
HVLP	24B863	24B881	0.028 (0.7)	24D179	24D176	24C191	
HVLP	24B864	24B882	0.043 (1.1)	24D305	24D299	24C193	
HVLP	24B865	24B883	0.051 (1.3)	24D306	24D300	24C194	
HiTEch	24B866	24B884	0.028 (0.7)	24D303	24D297	24C191	24D703
HiTEch	24B867*	24B885*	0.039 (1.0)	24C221	24C219	24C220	
HiTEch	24B868*	24B886*	0.059 (1.5)	24C201	24D275	24C195	24D704
LVMP	24B869	24B887	0.020 (0.5)	24D277	24D259	24C190	24C184
LVMP	24B870	24B888	0.028 (0.7)	24D278	24D260	24C191	
LVMP	24B871	24B889	0.035 (0.9)	24D279	24D261	24C192	
LVMP	24M391*	24M393*	0.039 (1.0)	24C221	24C219	24C220	
LVMP	24P993	24P995	0.039 (1.0)	24R001	24P999	24C220	
LVMP	24B872	24B890	0.043 (1.1)	24D280	24D262	24C193	
LVMP	24B873	24B891	0.051 (1.3)	24D281	24D263	24C194	
LVMP	24P994	24P996	0.051 (1.3)	24R002	24R000	24P998	
LVMP	24B874*	-----	0.059 (1.5)	24D284	24D276	24C195	
Air Brush	24B875	24B892	0.028 (0.7)	24C197	24C186	24C191	24D705

** Needle tip and nozzle exit constructed from tungsten carbide.*

Accessories

Kit 24C216, Fittings (1/4 inch)

Part	Description	Qty.
120388	FITTING, tube, air line, 1/8 npt x 1/4 T	3
111157	FITTING, tube, fluid line, 1/8 npt x 1/4 T	2

Kit 24D143, Robot Adapter Kit Fanuc Paint Mate 200

Compatible with and without manifold.

Kit 24D008, Inlet Air Needle Valve

Includes needle valve and 6mm tube fittings.

Kit 24D827, Manifold O-Rings

Part	Description	Qty.
106456	O-RING, PTFE, white	2
112319	O-RING, FX75, black	3

HVLP Pressure Verification Kit 24C214

For use in checking air cap atomizing and fan pattern air pressure at various supply air pressures. Not to be used for actual spraying.

Install the kit air cap on the gun. Turn on the air to the gun and read the air pressure on the gauge.

NOTE: To be “HVLP compliant,” the atomizing and fan pattern air pressure must not exceed 10 psi (70 kPa, 0.7 bar).

Dimensions

Guns with Manifold

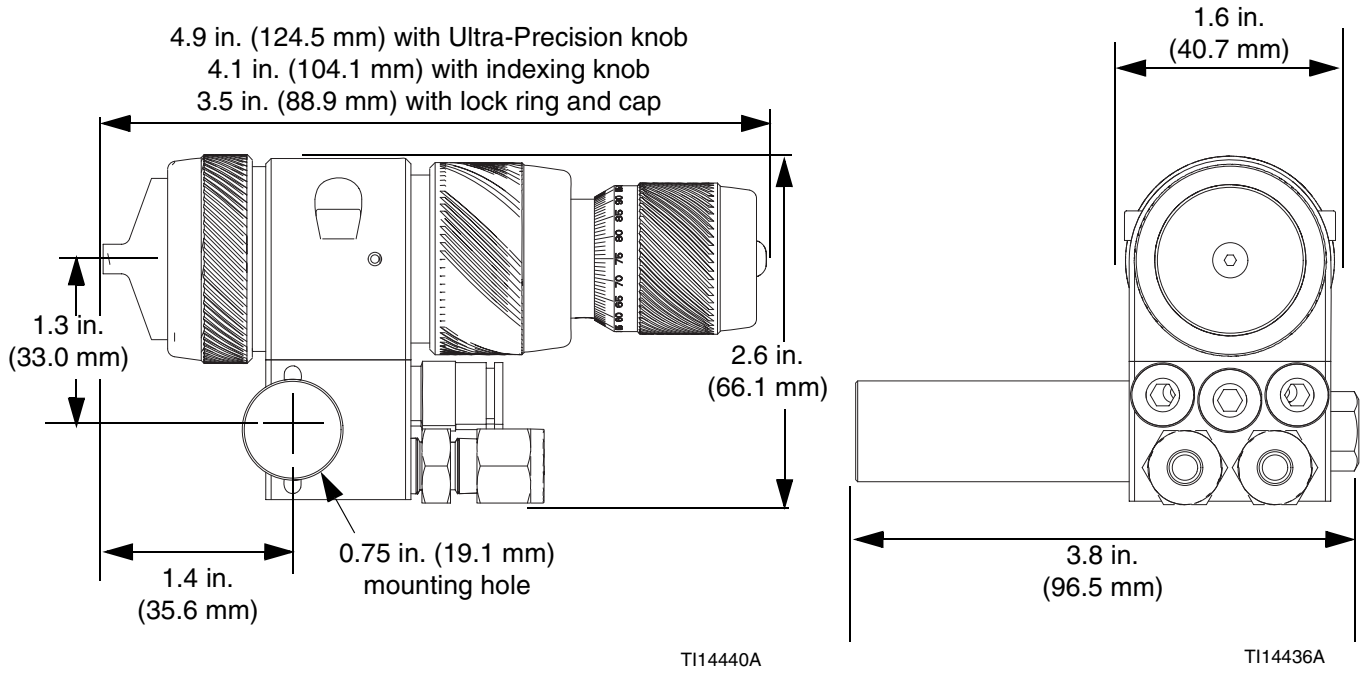


FIG. 20

Guns without Manifold

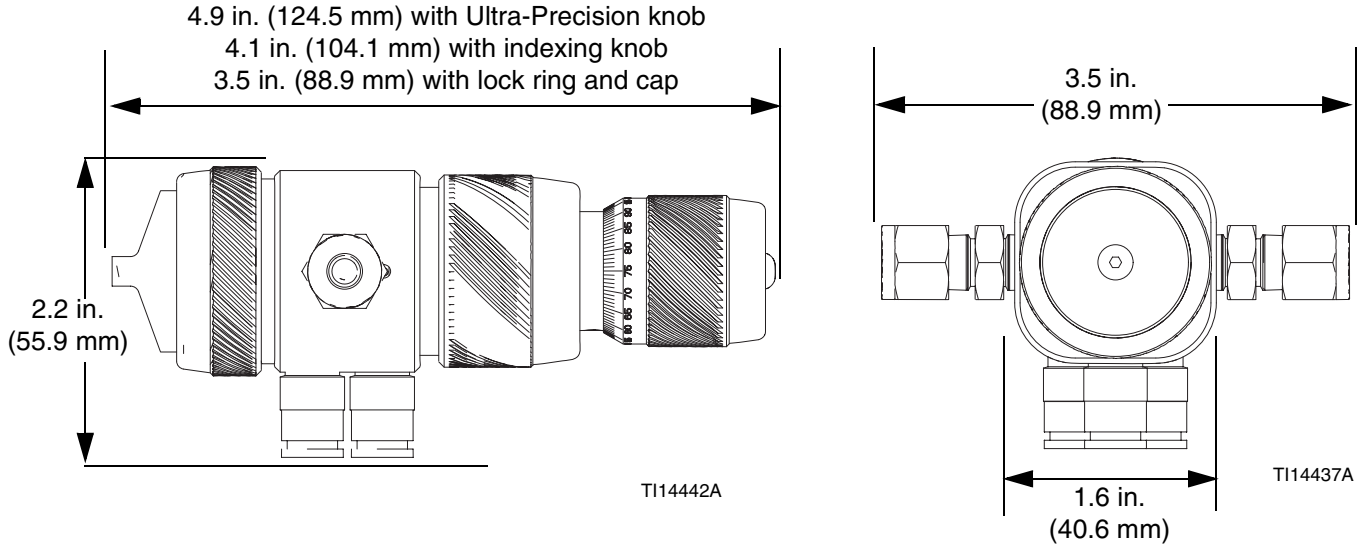


FIG. 21

Mounting Hole Layouts

Guns with Manifold

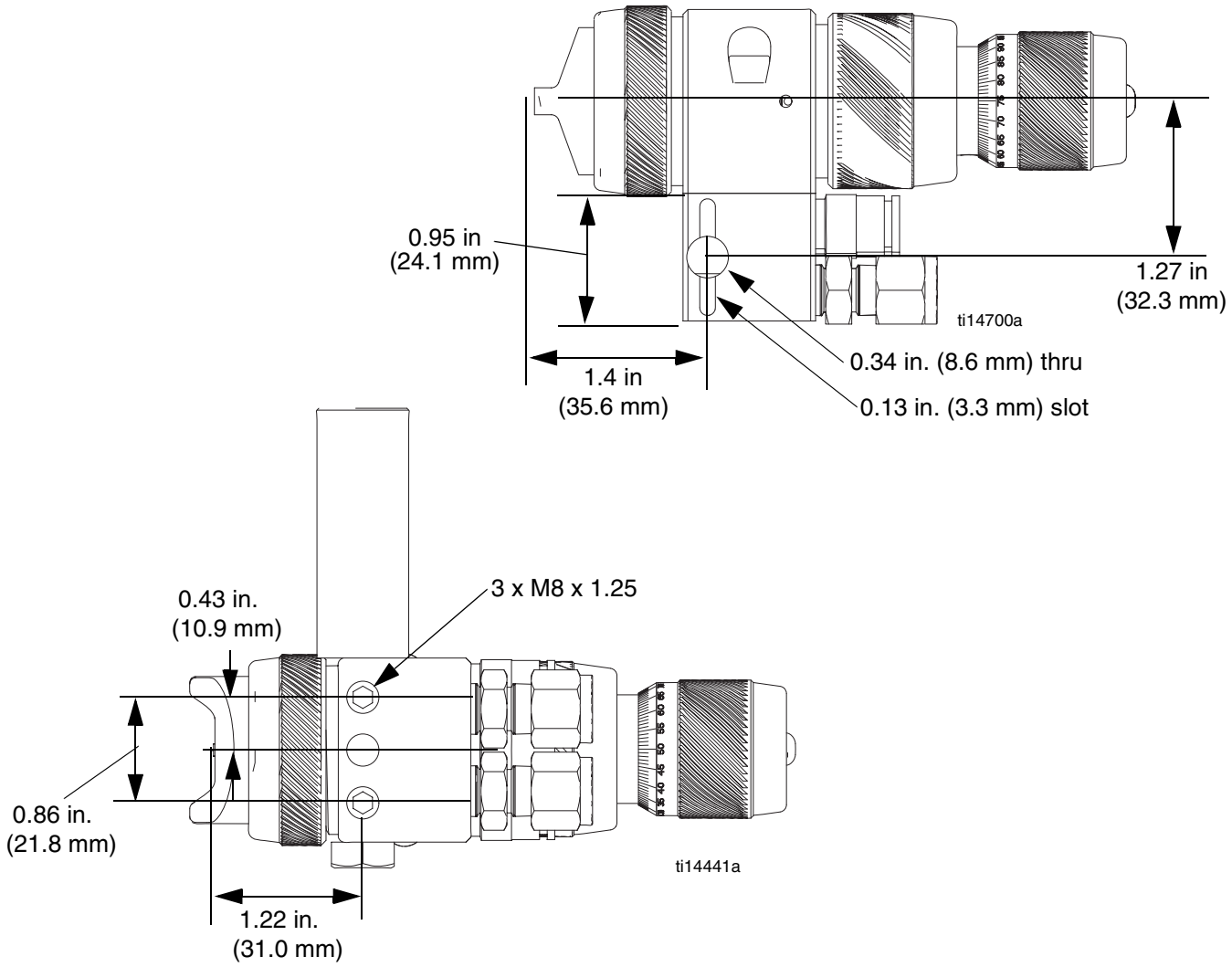


FIG. 22

Guns without Manifold

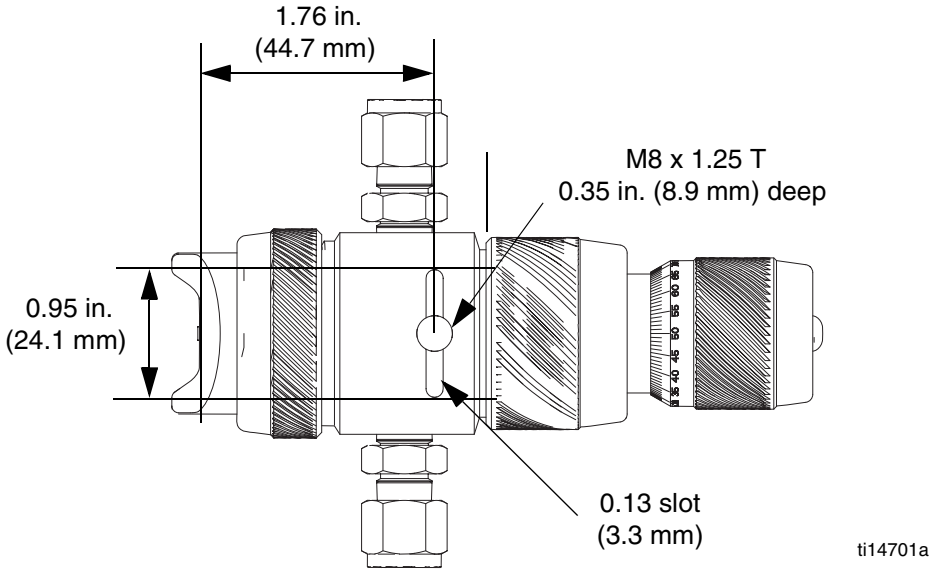


FIG. 23

Technical Data

Maximum working fluid pressure	100 psi (0.7 MPa, 7 bar)
Maximum working air pressure	100 psi (0.7 MPa, 7 bar)
Maximum HVLP Inbound Air Pressure	See chart on page 11.
Maximum Working Fluid Temperature	120° F (49° C)
Minimum Air Cylinder Actuation Pressure	50 psi (0.34 MPa, 3.4 bar)
Weight	
with manifold	1.3 lb (575 g)
with no manifold	0.6 lb (275 g)
Wetted Parts	
Models 24B857-24B860, 24B862-24B865, 24B869-24B873, 24B875, 24P993, 24P994	Nylon, PTFE, Stainless Steel, Ultra High Molecular Weight Polyethylene, Perfluoroelastomer
Model 24B866	PTFE, Stainless Steel, Ultra High Molecular Weight Polyethylene, Perfluoroelastomer
Models 24B867 and 24B868	PTFE, Stainless Steel, Ultra High Molecular Weight Polyethylene, Tungsten Carbide, Perfluoroelastomer
Models 24B861, 24B874, 24M390, and 24M391	Nylon, PTFE, Stainless Steel, Ultra High Molecular Weight Polyethylene, Tungsten Carbide, Perfluoroelastomer
Models 24B877-24B883, 24B887-24B892, 24P995, 24P996	Anodized Aluminum, Nylon, Stainless Steel, Ultra High Molecular Weight Polyethylene, Perfluoroelastomer
Models 24B885 and 24B886	Anodized Aluminum, Stainless Steel, Tungsten Carbide, Ultra High Molecular Weight Polyethylene, Perfluoroelastomer
Model 24B884	Anodized Aluminum, Stainless Steel, Ultra High Molecular Weight Polyethylene, Perfluoroelastomer
Models 24M392 and 24M393	Nylon, Anodized Aluminum, Tungsten Carbide, Ultra High Molecular Weight Polyethylene, Perfluoroelastomer

Triggering Speed

These values apply to a new gun with a 12 ft. (3.6 m), 1/4 in. (6.3 mm) OD cylinder air line and a 0.043 in. nozzle. These values will vary slightly with use and with variations in equipment.

Cylinder Air Pressure psi (kPa, bar)	**Fluid Pressure** psi (kPa, bar)	**Air Pressure** psi (kPa, bar)	**msec to fully open**	**msec to fully close**
50 (0.35, 3.5)	50 (0.35, 3.5)	100 (0.7, 7.0)	48	84

Sound Data

Conventional

Measured at 43 psi (0.30 MPa, 3.0 bar) atomizing air and fan air pressure

Sound Power . . . . . 87.76 dBa
Sound Pressure . . . . . 81.11 dBa

HVLP

Measured at 15 psi (0.10 MPa, 1.0 bar) atomizing air and fan air pressure

Sound Power . . . . . 78.46 dBa
Sound Pressure . . . . . 71.82 dBa

HiTEch

Measured at 29 psi (0.20 MPa, 2.0 bar) atomizing air and fan air pressure

Sound Power . . . . . 85.61 dBa
Sound Pressure . . . . . 79.23 dBa

LVMP

Measured at 43 psi (0.30 MPa, 3.0 bar) atomizing air and fan air pressure

Sound Power . . . . . 86.59 dBa
Sound Pressure . . . . . 79.92 dBa

Air Brush

Measured at 29 psi (0.20 MPa, 2.0 bar) atomizing air and fan air pressure

Sound Power . . . . . 73.03 dBa
Sound Pressure . . . . . 66.28 dBa

Sound power measured per ISO 9614-2.

Air Flow

See the chart to determine air consumption. Add the air consumption values shown for the atomizing air and fan air to get the total air consumption. For example, air cap 24C182 with 35 psi inlet pressure uses 3.9 scfm atomizing air and 5.4 scfm fan air for a total of 9.3 scfm air consumption.

Air Cap	**Gun/Manifold Inlet Pressure** psi (MPa, bar)	**Atomizing Air Flow** SCFM (m^3/min)	**Fan Pattern Air Flow** SCFM (m^3/min)
24C182 (Conv.)	10 (0.07, 0.7)	1.5 (0.04)	2.0 (0.06)
	15 (0.10, 1.0)	2.0 (0.06)	2.7 (0.08)
	20 (0.14, 1.4)	2.5 (0.07)	3.3 (0.09)
	25 (0.17, 1.7)	3.0 (0.08)	4.0 (0.11)
	30 (0.21, 2.1)	3.5 (0.10)	4.7 (0.13)
	35 (0.24, 2.4)	3.9 (0.11)	5.4 (0.15)
	40 (0.28, 2.8)	4.4 (0.12)	6.0 (0.17)
	45 (0.31, 3.1)	4.9 (0.14)	6.7 (0.19)
	50 (0.34, 3.4)	5.4 (0.15)	7.4 (0.21)
24C183 (HVLP)	10 (0.07, 0.7)	2.2 (0.06)	1.9 (0.05)
	15 (0.10, 1.0)	3.0 (0.08)	2.5 (0.07)
	20 (0.14, 1.4)	3.8 (0.11)	3.1 (0.09)
	25 (0.17, 1.7)	4.6 (0.13)	3.8 (0.11)
	30 (0.21, 2.1)	5.4 (0.15)	4.4 (0.12)
	35 (0.24, 2.4)	6.2 (0.18)	5.0 (0.14)
	40 (0.28, 2.8)	7.0 (0.20)	5.6 (0.16)
	45 (0.31, 3.1)	7.8 (0.22)	6.3 (0.18)
	50 (0.34, 3.4)	8.6 (0.24)	6.9 (0.19)
24D703 24D704 (HiTEch)	10 (0.07, 0.7)	2.2 (0.06)	1.9 (0.05)
	15 (0.10, 1.0)	3.0 (0.08)	2.5 (0.07)
	20 (0.14, 1.4)	3.8 (0.11)	3.1 (0.09)
	25 (0.17, 1.7)	4.6 (0.13)	3.8 (0.11)
	30 (0.21, 2.1)	5.4 (0.15)	4.4 (0.12)
	35 (0.24, 2.4)	6.2 (0.18)	5.0 (0.14)
	40 (0.28, 2.8)	7.0 (0.20)	5.6 (0.16)
	45 (0.31, 3.1)	7.8 (0.22)	6.3 (0.18)
	50 (0.34, 3.4)	8.6 (0.24)	6.9 (0.20)

Air Cap	**Gun/Manifold Inlet Pressure** psi (MPa, bar)	**Atomizing Air Flow** SCFM (m^3/min)	**Fan Pattern Air Flow** SCFM (m^3/min)
24C184 (LVMP)	10 (0.07, 0.7)	1.3 (0.04)	1.9 (0.05)
	15 (0.10, 1.0)	1.7 (0.05)	2.5 (0.07)
	20 (0.14, 1.4)	2.2 (0.06)	3.2 (0.09)
	25 (0.17, 1.7)	2.6 (0.07)	3.9 (0.11)
	30 (0.21, 2.1)	3.1 (0.09)	4.6 (0.13)
	35 (0.24, 2.4)	3.5 (0.10)	5.2 (0.15)
	40 (0.28, 2.8)	4.0 (0.11)	5.9 (0.17)
	45 (0.31, 3.1)	4.5 (0.13)	6.6 (0.19)
	50 (0.34, 3.4)	4.9 (0.14)	7.2 (0.20)
24D705 (Air Brush)	10 (0.07, 0.7)	1.5 (0.04)	N/A
	15 (0.10, 1.0)	2.0 (0.06)	N/A
	20 (0.14, 1.4)	2.5 (0.07)	N/A
	25 (0.17, 1.7)	3.0 (0.08)	N/A
	30 (0.21, 2.1)	3.5 (0.10)	N/A
	35 (0.24, 2.4)	3.9 (0.11)	N/A
	40 (0.28, 2.8)	4.4 (0.12)	N/A
	45 (0.31, 3.1)	4.9 (0.14)	N/A
	50 (0.34, 3.4)	5.4 (0.15)	N/A

Spray Pattern Test Report

Every AirPro EFX gun must pass a spray pattern test. The test report is printed and shipped in the box with the gun. A sample is reproduced here, with explanatory notes.

Width: the distance from one end of the pattern to the other along the spray pattern major axis.

Height: The distance from one end of the pattern to the other along the spray pattern minor axis.

Consistency: The calculated variation in concentration along the spray pattern major axis.

Position: The distance between the intended spray gun center target location and the actual spray pattern center location.

Curvature: The vertical distance between the spray pattern location and a line formed by the intersections of the spray pattern end points on the major axis.

Tilt: The angle between a horizontal line and a line formed by the spray pattern major axis.

GRACO

AirPro EFX
Spray Pattern Test Report

Test Number: 1234 — Use this number for reference in communications with Graco.
Operator: JI — Name of the technician who certified your gun.
Date: 6/17/2009 — Date on which the spray test was performed.

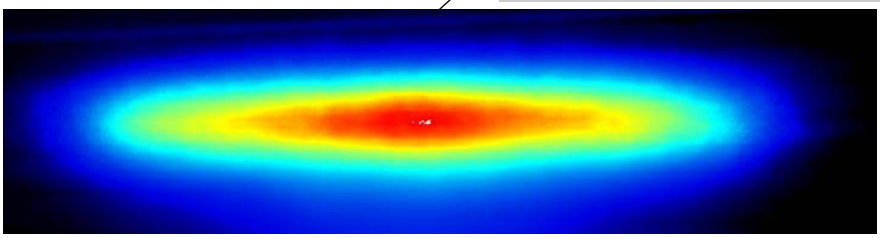
Part Number: 24B857 — Part number of your gun.
Date Code: F09A — Date code for Graco use only.

Spray Pattern Test Parameters

Width:	Passed
Height:	Passed
Consistency:	Passed
Position:	Passed
Curvature:	Passed
Tilt:	Passed

Certifies that the gun is within acceptable limits on all parameters.

Colors (if visible) represent paint density, with red meaning most paint particles and blue meaning fewest.



Actual spray pattern image

Notes:
- Detailed descriptions of the spray pattern test parameters can be found in instruction manual 313869.
- Spray pattern shape is dependent on the material type, material flow rate and air pressure.

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Original instructions. This manual contains English. MM 313869

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